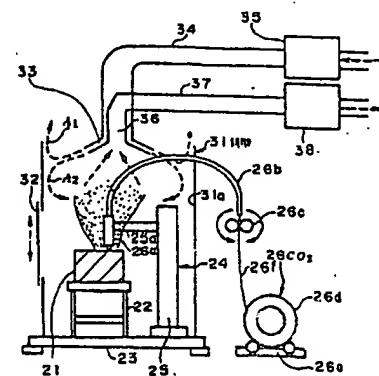


(54) SMOKE REMOVING DEVICE OF MACHINING EQUIPMENT

(11) 6-87092 (A) (43) 29.3.1994 (19) JP  
(21) Appl. No. 4-240871 (22) 9.9.1992  
(71) TOYOTA MOTOR CORP (72) TOSHIYUKI ONO(1)  
(51) Int. Cl<sup>5</sup>. B23K37/00,B23K7/10,B23K9/32,B23K26/16//B01D46/42

**PURPOSE:** To absorb dusts and soots without using a hood by providing a blow-out port where the air is radially ejected toward the inner circumferential surface of the side wall upward of a work and a machining equipment, and providing a suction port to suck the blown-out air on the inner side.

**CONSTITUTION:** A blowout port 33 to radially eject the air toward the inner circumferential surface of the side wall is provided upward of a work 21 and a machining equipment 24 whose circumference is surrounded by the side wall 31. A suction port 36 to suck the blown-out air is provided on the inner side of this blowout port, and dusts and soots generated during the machining operation can be collected without using a hood. This arrangement reduces the time required to install the smoke removing device, and the hood mounting work which is performed in a high position becomes unnecessary, reducing the dangerous works, and increasing the safety of the installation works of the smoke removing device.



25: welding robot, 26: CO<sub>2</sub> welding machine, 35: air supply fan, 38: air exhaust fan

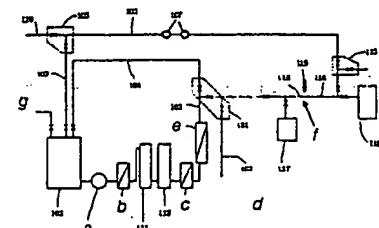
(54) WELDING SYSTEM FOR PIPING TO SUPPLY SUPER HIGH PURITY FLUID

04/11/07

(11) 6-87093 (A) (43) 29.3.1994 (19) JP  
(21) Appl. No. 3-331352 (22) 20.11.1991  
(71) TADAHIRO OMI (72) TADAHIRO OMI(1)  
(51) Int. Cl<sup>s</sup>. B23K37/00, B23K9/00, B23K9/028, B23K9/035, B23K9/16

**PURPOSE:** To provide a welding system for the piping to supply a super-high purity gas where the metal adhered in the vicinity of the surface of the weld zone and on the inside of the gas supplying system in installing the piping system to supply the super-high purity gas can be easily and completely removed, and the supplying system of the super-high purity gas can be started in a short time.

**CONSTITUTION:** In a welding system for the piping to supply the gas where a plurality of members to be welded are connected by welding, a supplying means for the inert gas or the back seal gas for welding and a super-pure water supplying means are provided on a first member 113 to be welded, a discharging means of the inert gas or the back seal gas and the super-pure water discharging means are provided on a second member 114 to be welded, the first and the second member to be welded are welded while the inert gas or the back seal gas is flowed, the super-pure water is flowed after welding, and the metallic fume adhered on the inner surface of the members to be welded can be washed away and removed.



a: pump, b: micro filter, c: micro filter, d: Ar gas (N<sub>2</sub> gas), e: UF filter, f: weld zone, g: city water

(54) HEAT EXCHANGING BACKING BODY

(34) HEAT EXCHANGING BICKING SUB  
(11) 6-87094 (A) (43) 29.3.1994 (19) JP  
(21) Appl. No. 4-242312 (22) 10.9.1992  
(71) SHINTOU KOGYO K.K.(1) (72) KENJI UMENO(4)  
(51) Int. Cl. B23K37/06, B23K9/035

**PURPOSE:** To provide a heat exchanging backing body which can be used in back bead welding for a long time without exchanging the backing material.

**CONSTITUTION:** A backing material 12 having copper-aluminum alloy layer 13 containing 9-26wt.% aluminum on the surface of the welded material side is arranged on the upper surface of a backing body 11a, and the backing material 12 is cooled by providing a cooling water chamber 14 where the cooling water is circulated inside of the backing body 11a and the backing material 12.

